WE CLAIM:

1. A method of performing call admission control upon receipt of a request for a new session comprising:

making an estimate of a new system FER which will result should the new session be admitted; and

deciding to admit or to deny the new session on the basis of the new system FER estimate.

2. A method according to claim 1 wherein making the estimate of the new system FER comprises:

making an estimate of a previous system FER at the time of the request;

determining an estimate of a degradation in the system FER should the new session be admitted; and

combining the estimate of the degradation to the estimate of the previous system FER to obtain said estimate of the total system FER.

3. A method according to claim 2 wherein making an estimate of a previous system FER at the time of the request comprises measuring the system FER.

4. A method according to claim 2 wherein making an estimate of a previous system FER at the time of the request comprises:

starting with the previous system FER equal to an initial system FER;

each time a session is admitted, adding the degradation estimated for the session to the previous system FER; and

each time a session is ended, subtracting a degradation reduction for the session from the previous system FER.

5. A method according to claim 2 further comprising:

maintaining an expected degradation in the system FER as a function of how many sessions have been admitted;

wherein determining an estimate of a degradation in the system FER should the new session be admitted comprises:

maintaining a current count of how many sessions have been admitted; and

setting the estimate of the degradation in the system FER equal to the expected degradation for the current count.

6. A method according to claim 2 wherein the request for a new session identifies the session as having one of at least two different types, the method further comprising:

maintaining an expected degradation in the system FER as a function of how many sessions of each of said different types have been admitted;

wherein determining an estimate of the degradation in the system FER should the new session be admitted comprises:

maintaining a current count of how many sessions of each type have been admitted; and

setting the estimate of the degradation in the system FER equal to the expected degradation for the session's type and the type's current count.

7. A method according to claim 6 wherein maintaining an expected degradation in the system FER as a function of how many sessions of each of said different types have been admitted comprises:

generating test traffic with a predetermined ratio between numbers of sessions of each type; and

adding new sessions to the test traffic and making a measurement of the degradation in FER, and using these measurements as the expected degradations.

8. A method according to claim 6 further comprising:

identifying an initial value for the degradation in FER for the Nth session of each type;

each time an N+1th session of a particular type is admitted, making a measurement of the degradation which results; and

determining the expected degradation for the Nth session to be an average of up to K measurements for N+1th session admissions and the initial value for the Nth session if there are fewer than K measurements, where K is an integer greater than or equal to two.

9. A method according to claim 8 wherein identifying an initial value comprises:

generating test traffic with a predetermined ratio between numbers of sessions of each type; and

adding new sessions to the test traffic and making a measurement of the degradation in FER, and using these measurements as the initial values.

10. A method according to claim 1 wherein admitting or denying the new session on the basis of the new FER estimate comprises:

comparing the new FER estimate to a target FER, and if the new FER estimate exceeds the target FER denying the session, and if the new FER estimate does not exceed the target FER admitting the session.

11. A method according to claim 2 further comprising:

identifying an initial value for the degradation in FER for an Nth session admission;

making measurements of the degradation which results due to Nth session admissions; and

determining the expected degradation for the Nth session to be an average of up to K measurements for Nth session admissions and the initial value for the Nth session if there are fewer than K measurements, where K is an integer greater than or equal to two.

12. A method according to claim 11 wherein one of said measurements of the degradation which results due to Nth session admissions is taken around the time an N+1th session admission occurs.

13. A method according to claim 11 wherein one of said measurements of the degradation which results due to Nth session admissions is taken before an N+1th session admission occurs and after the Nth session has been active for long enough for a meaningful measurement to be taken.

14. A MAC (media access control) layer implementation device operable to execute a method according to claim 1.

15. A base station operable to execute a method according to claim 1.

16. A base station controller operable to execute a method according to claim 1.

17. A method of performing call admission control upon receipt of a request for a new session comprising:

selecting a MAC (media access control) layer (or equivalent layer) parameter which is affected by all different session types in a manner which makes it suitable for use as a basis of call admission control;

making an estimate of said MAC (media access control) layer (or equivalent layer) parameter which will result should the new session be admitted; and

admitting or denying the new session on the basis of the MAC layer (or equivalent layer) parameter.

18. A call admission control apparatus comprising:

an input device operable to receive a request for a new session; and

a processing element operable to make a FER (frame error rate) estimate of a new system FER which will result should the new session be admitted and to decide whether to admit or to deny the new session on the basis of the new FER estimate.

19. An article of manufacture comprising:

a computer usable medium having computer readable code means embodied therein for performing call admission control, the computer readable code means in said article of manufacture comprising:

computer readable code means for making an estimate of a new system FER which will result should a new session be admitted; and

computer readable code means for deciding to admit or to deny the new session on the basis of the new system FER estimate.

20. An article of manufacture according to claim 19 further comprising:

computer readable code means for making an estimate of a previous system FER at a time of the request;

computer readable code means for determining an estimate of a degradation in the system FER should the new session be admitted; and

computer readable code means for combining the estimate of the degradation to the estimate of the previous system FER to obtain said estimate of the total system FER.